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Application No. 10/523,145

Amendments to the Claims:

118

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A voltage conversion apparatus converting a direct current voltage from a DC power supply into an output voltage such that ~~said the~~ output voltage is equal to a designated voltage, comprising:

a voltage converter altering a voltage level of ~~said the~~ direct current voltage to provide ~~an the~~ output voltage,

a detection unit detecting the output voltage output from ~~said the~~ voltage converter, and

a control unit controlling ~~said the~~ voltage converter based on ~~said the~~ detected output voltage and ~~said the~~ designated voltage, wherein a transient response property of ~~said the~~ voltage converter with respect to ~~said the~~ designated voltage in feedback control is consistent with a reference transient response property of the voltage converter when the voltage level of the direct current voltage is equal to a reference voltage at a first time, where the output voltage crosses the designated voltage after a first time period after the first time independent of the output voltage at the first time, and said output voltage is equal to said designated voltage.

2. (Previously Presented) The voltage conversion apparatus according to claim 1, wherein

said voltage converter includes a chopper circuit,

said control unit comprises

a feedback voltage control value calculation unit detecting a difference between said output voltage and said designated voltage to determine a control gain in said feedback control in accordance with the detected difference, and calculating a feedback voltage control value in said feedback control such that said transient response property is equal to said reference transient response property based on the determined control gain, said output voltage, and said difference,

a duty ratio calculation unit calculating a switching duty ratio of said chopper circuit, based on said calculated feedback voltage control value, and